TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2023-2024

MATHEMATICS-II (A) **IIYEAR**

Month/ No. of working days& Periods	Topics to be covered Unit test/ Exams/ Assignments/EAMCET classes to be conducted.	Periods allotted for each topic
June 24	Syllabus and pre-requisites	**01**
	01 Complex Numbers:	
	1.1 Complex number as an ordered pair of real numbers- fundamental operations	**02**
	1.2 Representation of complex numbers in the form a+ib.	**01**
	1.3 Modulus and amplitude of complex numbers – Illustrations.	
	1.4 Geometrical and Polar Representation of complex numbers in Argand plane-Argand diagram.	**03**
	02 De Moivre's Theorem:	**04**
	2.1 De Moivre's theorem- Integral and Rational indices.	**04**
	IPASE JUNE 2023	**08**
	ASSIGNMENT-I	**01**
July 23	2.2 n^{th} roots of unity- Geometrical Interpretations – Illustrations.	**03**
	EAMCET classes on Complex Numbers and De Movier's Theorem	**01**
	03 Quadratic Expressions:	
	3.1 Quadratic expressions, equations in one variable	**02**
	3.2 Sign of quadratic expressions – Change in signs – Maximum and minimum values	**04**
	3.3 Quadratic inequations	**03**
	EAMCET classes on Quadratic expressions	**01**
	04 Theory of Equations:	
	4.1 The relation between the roots and coefficients in an equation	**03**
	4.2 Solving the equations when two or more roots of it are connected by certain relation	**04**
	UNIT TEST –I	**01**
	ASSIGNMENT-II	**01**

August 25	4.3 Equation with real coefficients, occurrence of complex roots in conjugate pairs and its consequences	**04**
	4.4 Transformation of equations – Reciprocal Equations.	**05**
	EAMCET classes on Theory of equations	**02**
	05 Permutations and Combinations:	
	5.1 Fundamental Principle of counting – linear and circular permutations	**03**
	5.2 Permutations of 'n' dissimilar things taken 'r' at a time	**03**
	5.3 Permutations when repetitions allowed	**03**
	5.4 Circular permutations	**03**
	UNIT TEST -II	**01**
	ASSIGNMENT-III	**01**
September 22	5.5 Permutations with constraint repetitions	**03**
	5.6 Combinations-definitions and certain theorems	**04**
	EAMCET classes on Permutations &Combinations	**02**
	06 Binomial Theorem:	
	6.1 Binomial theorem for positive integral index	**11**
	UNIT TEST-III	**01**
	ASSIGNMENT -IV	**01**
October 18	6.2 Binomial theorem for rational Index (Without proof)	**06**
	6.3 Approximations using Binomial theorem	**04**
	EAMCET classes on binomial theorem	**02**
	07 Partial fractions:	
	7.1 Partial fractions of f(x)/g(x) when g(x) contains non –repeated linear factors.	**02**
	7.2 Partial fractions of f(x)/g(x) when g(x) contains repeated and/or non-repeated linear factors.	**02**
	EAMCET class on partial fractions	**01**
	ASSIGNMENT –V	**01**
FIRST TERM HOLIDAYS FROM 19-10-2023 TO 25-10-2023		
November 24 (18P)	7.3 Partial fractions of f(x)/g(x) when g(x) contains repeated and non-repeated irreducible factors only	**02**
	08 MEASURES OF DISPERSION	**01**
	8.1 Range	**03**
	8.2 Mean deviation	**07**
	8.3 Variance and standard deviation of ungrouped/grouped data.	**04**
	8.4 Coefficient of variation and analysis of frequency distribution with equal means but different variances.	**01**
	EAMCET classes on Measures on Dispersion	

HALF YEARLY EXAMINATIONS FROM 20-11-2023 TO 25-11-2023		
December 23	**09 Probability** 9.1 Random experiments and events 9.2 Classical definition of probability, Axiomatic approach and addition theorem of probability. 9.3 Independent and dependent events Conditional probability- multiplication theorem and Bayee's theorem. **EAMCET** Classes on Probability **UNIT TEST-IV** **ASSIGNMENT-VI**	 **06** **06** **07** **02** **01** **01**
January 23 (17 P)	**10 Random Variables and Probability Distributions:** 10.1 Random Variables 10.2 Theoretical discrete distributions – Binomial and Poisson Distributions **EAMCET c**lasses on Probability and Random variables &Probability Distribution **REVISION**	 **04** **07** **02** **04**
SECOND TERM HOLIDAYS FROM 13-01-2024 TO 16-01-2024		
PRE-FINAL EXAMINATIONS FROM 22-01-2024 TO 29-01-2024		
February 23 (16 P)	**REVISION** DATE OF COMMENCE MENT OF PRACTICAL EXAMS 2ND WEEK OF FEB-2024	**16**
March 22	DATE OF COMMENCE MENT OF THEORY EXAMS 1ST WEEK OF MARCH-2024 **LAST WORKING DAY : 31-03-2024**	**22**

Prepared by: **M. VIJAYA SEKHAR,** JL in Maths
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TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2023-2024

MATHEMATICS-II (B) **IIYEAR**

Month/ No. of working days& Periods	**Topics to be covered Unit test/ Exams/ Assignments/EAMCET classes to be conducted.**	**Periods allotted for each topic**
June 24	Syllabus and pre-requisites	**02**
	01. Circle :	
	1.1 Equation of circle -standard form-centre and radius of a circle with a given line segment as diameter & equation of circle through three non collinear points -parametric equations of a circle.	**04**
	1.2 Position of a point in the plane of a circle – power of a point-definition of tangent-length of tangent	**04**
	1.3 Position of a straight line in the plane of a circle-conditions for a line to be tangent – chord joining two points on a circle – equation of the tangent at a point on the circle- point of contact-equation of normal.	**05**
	IPASE JUNE 2023	**08**
	ASSIGNMENT-I	**01**
July 23	1.4 Chord of contact - pole and polar-conjugate points and conjugate lines - equation of chord with given middle point.	**04**
	1.5 Relative position of two circles- circles touching each other externally, internally common tangents –centers of similitude-equation of pair of tangents from an externalpoint	**03** **06**
	EAMCET classes on Circles	**03**
	02. System of circles:	
	2.1 Angle between two intersecting circles.	**05**
	UNIT TEST-I	**01**
	ASSIGNMENT-II	**01**
August 25	2.2 Radical axis of two circles- properties- Common chord and common tangent of two circles – radicalcentre.	**05**
	2.3 Intersection of a line and a Circle.	**02**
	EAMCET classes on system of circles	**02**

	06. Integration :	**02**
	6.1 Integration as the inverse process of Differentiation- Standard forms –properties of integrals.	**04**
	6.2 Method of substitution- integration of Algebraic, Exponential, Logarithmic, Trigonometric and Inverse trigonometric functions. Integration by parts.	**08**
	UNIT TEST -II	**01**
	ASSIGNMENT-III	**01**
September 22	6.2 Method of substitution- integration of Algebraic, Exponential, Logarithmic, Trigonometric and Inverse trigonometric functions. Integration by parts. (Remaining part)	**06**
	6.3 Integration- Partial fractions method.	**04**
	6.4 Reduction formulae	**05**
	EAMCET classes on integration	**02**
	07. Definite Integrals:	
	7.1 Definite Integral as the limit of sum	**03**
	UNIT TEST –III	**01**
	ASSIGNMENT-IV	**01**
October 18	7.2 Interpretation of Definite Integral as an area.	**04**
	7.3 Fundamental theorem of Integral Calculus.	**03**
	7.4 Properties	**05**
	7.5 Reduction formulae.	**05**
	ASSIGNMENT-V	**01**
FIRST TERM HOLIDAYS FROM 19-10-2023 TO 25-10-2023		
November 24 (18P)	7.6 Application of Definite integral to areas.	**03**
	08. Differential equations:	
	8.1 Formation of differential equation-Degree and order of an ordinary differential equation.	**02**
	8.2 Solving differential equation by	
	a) Variables separable method.	**03**
	b) Homogeneous differential equation.	**03**
	c) Non - Homogeneous differential equation.	**03**
	d) Linear differential equations.	**03**
	EAMCET class on differential equations	**01**
HALF YEARLY EXAMINATIONS FROM 20-11-2023 TO 25-11-2023		
December 23	**03. Parabola:**	
	3.1 Conic sections –Parabola- equation of parabola in standard form-different forms of parabola-Parametric equations.	**08**

	3.2 Equations of tangent and normal at a point on the parabola (Cartesian and Parametric)- conditions for straight line tobe a tangent. **EAMCET** classes on parabola **04. Ellipse:** 4.1 Equation of ellipse in standard form- Parametric equations. **UNIT TEST-IV** **ASSIGNMENT-VI**	**06** **01** **06** **01** **01**
January 23 (17 P)	4.2 Equation of tangent and normal at a point on the ellipse (Cartesian and parametric)- Condition for a straight line to be a tangent. 4.2 Equation of tangent and normal at a point on the ellipse (Cartesian and parametric)-condition for a straight line to be a tangent. (remaining part) **EAMCET** classes on ellipse **05. Hyperbola:** 5.1 Equation of hyperbola in standard form- Parametric equations. 5.2 Equations of tangent and normal at a point on the hyperbola (Cartesian and parametric)- conditions for a straight line to be a tangent- Asymptotes **EAMCET c**lass on Hyperbola	**05** **02** **02** **04** **03** **01**
SECOND TERM HOLIDAYS FROM 13-01-2024 TO 16-01-2024		
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